This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Educ
3518
83

Educ 3518.83 Bd. Nov. 1885

Harvard College Library

FROM

The President's Office

7 Oct., 1885.

Educ 35.18.83

WHAT IS A LIBERAL EDUCATION

ADDRESS

OF

HON. FRANKLIN H. HEAD,

OF CHICAGO, ILL.

WHAT IS A LIBERAL EDUCATION

AN ADDRESS

DELIVERED BY

HON. FRANKLIN H. HEAD,

OF CHICAGO, ILL.,

BEFORE THE

Alumni Association of Hamilton College,

AT CLINTON, N. Y.,

WEDNESDAY, JUNE 27, 1883.

UTICA, N. Y.
ELLIS H. ROBERTS & CO., PRINTERS, 60 GENESEE STREET.
1883.

Educ 35.8.53
H. 2878

What is a Liberal Education?

When I received your kindly invitation to address you at our annual reunion, I felt great hesitation as to its acceptance. For much the greater portion of the twenty-five years since I left the pleasant halls of old Hamilton, my life and pursuits have been in paths alien to those of the cloistered man of letters. I said to myself, what thought can one bring from amid the rush and the whirl of a life of active business: from the clangor and roar of iron works and mills, or from the seething and boiling of great laboratories, where the crude products of nature are tortured into forms to meet the wants of commerce; what thought can he bring worthy the attention of an assemblage of scholars?

So I wrote of my doubts to the only one of the college faculty of my time still actively engaged in his chosen work—Professor North. Dear and honored and venerable name! Long may he live and reign and win the love of new generations of students, as he has dwelt in the inmost hearts of all who have in times past gone forth from his kindly ministrations. And the good Professor spoke words of cheer as is his wont; and of the needed word as to the benefits of liberal education in the industrial arts; and as the work of the student has always seemed to me favored both of heaven and of men, and the meeting with scholars and participating in their festivities, in however humble part, is as the shadow of a great rock in a weary land; is a delight appreciated most perhaps by those whose pursuits

have borne them afar from such glad joys; I listened as of old to the genial voice. Upon the dear Professor rests a weighty responsibility.

I need not say that every alumnus of Hamilton is loyal to his Alma Mater and ambitious for her growth in usefulness and power. And as in our time much discussion is taking place of the proper methods of education, and of the value at all of the college curriculum, what remarks I shall offer this evening will be upon the desirableness of a liberal education, especially to the man of affairs, and, if this be established, upon what should be considered a *liberal* education. There is a widely spread opinion among thinking men, especially perhaps in industrial and business life, but among men of letters as well, that the usual college course of study, with its close adhesion to text books and its little study of nature face to face, is impractical and apart from the life of the world; is in many respects as valueless as the doubtings and ponderings of the schoolmen over the subtle scholasticisms of the days of Abelard.

Carlyle says, "education is beyond so much as being despised we must praise it when it is not *d*-education, or an utter annihilation of what it professes to foster. The best educated man you will often find to be the artisan or at all rates the man of business. For why? He has put forth his hand and operated on nature; must actually attain some insight or he can not live. Your scholar proper, your so-called man of letters, is a thing with clearer vision through the hundredth part of an eye. A Burns is infinitely better educated than a Byron."

Emerson says, "one of the benefits of a college education is to show the boy its little avail." And

again he says, "we are students of words; we are shut up in schools and colleges and recitation rooms for ten or fifteen years and come out at last with a bag of wind; a memory of words, and do not know a thing. We can not use our hands or our legs or our eyes or our arms. We can not tell our course by the stars nor the hour of the day by the sun." And in the same discourse, referring to the study of the ancient languages, he says, "four or six or ten years the pupil is parsing Greek and Latin, and as soon as he leaves the university—as it is ludicrously styled—he shuts these books for the last time. Some thousands of young men are graduated at our colleges in this country every year, and the persons who at forty years still read Greek can all be counted on your hand. I never met ten. Is not this absurd, that the whole liberal talent of this country should be directed in its best years on studies which lead to nothing? Centuries ago Latin and Greek had a strict relation to all the science and culture there was in Europe; by a wonderful drowsiness of usage they became stereotyped as education."

Bastiat talks of the "stranded graduates."

Thackeray said he had no brains above his eyes.

Wm. Morris Hunt in his "Talks on Art" says, "if you have something to say, say it; if not, go to college and you will get grammar and dictionary to hide the fact that you don't know anything." Some one asked him "is there any good book about drawing oxen?" No, said Hunt, "there isn't any good book but out-of-doors." He refused to lecture at the Yale school of fine arts, because his time was all taken up trying to learn how to paint; and said he, "as I could get no in-

formation from books and lectures I don't believe I could give any."

Margaret Fuller says in substance that the college graduate is, until he has forgotten his training, and learned anew by practical experience and the mingling with men, a poor citizen, whose knowledge and modes of thought are all of dead and buried Greek empires, and not of the world of to-day. And Herbert Spencer in his most popular work arraigns boldly all of what is known as the higher education, as an almost utter waste of time. These sundry statements and many others which might be quoted from the writings of scholars, can not be without some foundation.

What is the matter with our colleges? Why does not their clientage increase ratably with the nation's growth in wealth and population?

Within the past fifty years the steamboat, the locomotive, the telegraph, the telephone and kindred inventions, and the myriad applications thereof, have revolutionized all modes of work. Transactions which used to occupy weeks, occupy minutes, and competition in all trades and professions has reached a pitch previously unknown and impossible. One result of this intense activity is to make all men specialists. There seems so much to do and to know in every business or profession that no one can master it all and use it with the dispatch necessary for the usages of the life of to-day, and so he learns and practices over and over some one thing. In our large cities, the centers of the world's life and work, in the legal profession, you will find real estate lawyers, commercial lawyers, chancery lawyers, railroad lawyers, maritime lawyers, with but few men of broad and comprehensive learning, and

those largely of a generation presently to pass from the stage.

You shall find the leading physicians are men who treat specially diseases of the lungs, or of the throat, or of the heart, or of the eye, men of learning in one special field. And the same is true in the more common walks of life. When in college here I recollect I used sometimes to look in at a little shop where three or four men were making farm wagons. Each man took his materials, formed and put them together and made his dozen or two wagons in the year. Recently in the great factory of a friend who makes one or two thousand farm wagons each month, in reply to my question, he informed me that probably no one among his hundreds of mechanics could make a complete wagon. One man made hubs with surpassing skill, another sawed felloes; another, year after year welded tires or painted red stripes on the axle, or japanned with black the heads of bolts.

And so in commercial life, while the small country merchant may still deal in all created things, business of magnitude is in special lines.

The result of this intense study of a limited field is to make men of one idea; men with one set of faculties or muscles abnormally developed; one-sided and not many-sided men. In many ways this is disadvantageous to the man and to his fellows. The lawyer who simply knows corporation law, when promoted to the bench must be educated for his new duties at great expense to suitors and to the State. The country parson who has won local honors from his exposition of the doctrines, entering a wider field, learns that man lives not by predestination alone. The manufacturer,

who, boring a thousand holes in a day in an iron plate, when others bored but five hundred, has thereby risen to wealth and perhaps the management of a great corporation, finds himself a child in the presence of complex questions of finance, of supply or demand, or the seeming conflicts of capital and labor. At the same time, the world is immeasurably better for the causes which lead to certain of these disadvantageous results: as Tennyson phrases it,

"The individual withers, and the world is more and more."

This minute and ever widening division of labor, whereby every man, whether in literature or mechanics, does that for which he has special fitness, has led to the vast multiplication of the joys of life, has brought the treasures of the world's literature to the houses of all, has filled the homes of the laborer, the mechanic and the farmer with comforts and luxuries which no wealth could command a century ago. It is the fittest condition for humanity and must therefore survive. All the more, however, is there the necessity for men of broad and comprehensive views, and to make such men should be the work of our colleges.

The general idea of training men for special work has led many people to advocate schools for the young, where the boy from childhood almost is to be trained with reference to his life work, and many such technical schools are now being put in operation. This, however, seems to me a sad mistake. The youth who is nursed upon Blackstone, who absorbs Kent and Parsons during his adolescence and who can digest Dwight on charitable uses as he is learning to shave, but who is without broad and comprehensive training in language, literature and philosophy, will not make

the Hale or Marshall of the coming years. The whole tendency of a professional or business life is to produce a merely practical and narrow outlook: to make men regard everything in the earth and heaven alike from the standpoint of personal interest and profit: "to give man a pin hole view of the universe;" and unless in their plastic days, before beginning the battle of life, our young men receive something of a broad and liberal training, it is rarely acquired later.

Men of large and generous culture are what the world most needs from our colleges to-day: a culture which broadens and lifts them from their little circle to an interest in all knowledge without regard to profit; men broad enough to see that the general good is their own greatest good; and on such men their special training in life can afterwards be grafted with advantage and profit.

For such men, never was so great a field white for the harvest. Our land is full of crudities in politics, in science and in affairs. Because of this, the nation breathes freer when congress at last adjourns. Because of this narrowness of vision, every species of wild and crazy delusion has its advocates and few to answer them. We need everywhere educated men of affairs, who can see in panicy times, and at all times, that labor and capital are never antagonistic, but each indispensable to the other and of necessity allied workers for the common good: men whom science has taught that something never can come from nothing, and that therefore all attempts to create wealth which is the surplus of labor, by currency inflations or tamperings, or legislative changes of values, or impairings or repudiations of contracts, are necessarily and always evil: men whose broad and varied learning shall

reveal to them the shifting tides and currents of the great law of demand and supply which lies at the foundation of all commerce: a knowledge of which guides to individual and national progress and wealth; an ignorance of which, alas, too common leads to over-production, to panics, to needless strikes, to communistic riots and ravings, to sorrow, poverty and crime.

Educated men of business by their influence upon their associates and subordinates should be the strongest bulwark of society against social heresies, and should aid in that dissemination of intelligence among the masses which in a republic is the sole condition precedent of political security. To supply this want, to give us this class of liberally educated and trained men is the true mission of our colleges and universities. After young men have left school and engaged in some business or profession, they rarely find time for studying outside their special field, unless a taste for general literature and science has been formed in their training days.

Our educational institutions are conservative and wisely so, since changes in established usages should be made only upon due consideration. But such conservatism should not be carried to the extreme of a non-recognition of the fact that the world moves; and as one deeply interested in the welfare of our Alma Mater, I would gladly make some suggestions, the result of experience and of observation of the general public sentiment as to what should be to-day considered a liberal education.

It is a national misfortune that far too small a proportion of our successful business men are men of generous culture. The idea which hundreds of years

ago inspired the founding of institutions of learning, was to educate the clergy; afterwards, as learning became more general, to educate the clergy and lawyers, and this idea is far too prominent in all our colleges to-day. I would be far from decrying the importance of the clerical and legal professions, but men and women have bodies as well as souls and need houses and clothing and transportation as well as demurrers and contingent remainders.

The members of the legal profession from their knowledge of law and law-making are much in public life, and a considerable proportion of our legislators, State and federal, is drawn from their ranks. In such legislatures for the same reason they are largely entrusted with the drafting and shaping of our laws. In this manner a considerable proportion—possibly five per cent—of our legal brethren find at times an honorable and reasonably remunerative employment. The other ninety-five per cent, in their offices, in court rooms and upon the bench, with sweat and mental agony and toil, busy themselves in endeavoring to guess the meaning and application of the laws thus formulated. Abundant guesses are made on every possible side of every possible question. The opposing counsel explain the reason of their guesses to the jury. The jury thereupon make their guess. The circuit judge delivers his conjecture. The superior judges examine his reasons and guess again, and the court of last resort promulgates its final guess. Final at least until their successors, with added light, guess otherwise. Long before this, however, the law has usually been repealed and a new one enacted and sent forth on its career as a conundrum.

The rows of stately tomes in the theological libraries bespeak the long continued industry of our clerical brethren. In these volumes are discussed both sides of all doctrinal questions for hundreds or even thousands of years, without positive conclusions being reached on any single doctrine. The opposing hosts are still marshalled as at the dawn of history. Neither party knows or has proof of any of the points in dispute. Each is discussing questions, the solution of which transcends and ever must transcend the bounds of human knowledge.

Without denying in any way the value of a training which shall fit one thus to guess at legal or theological queries, we must concede that this is not the whole of the world's work which is to be done. Those who should form by far the larger part of our college students should be those contemplating a life of active business, of labor in the paths of literature, of commerce or affairs. Many men of intelligence and judgment, feeling that much of the time spent in the usual college course could be more profitably spent otherwise, are sending their sons to special and technical schools rather than to our colleges. This is a misfortune. There should be no divorce between our higher institutions of learning and the whole people. Should this come, the colleges become simply another class of special schools; Greek and Latin schools. Great advances in every department of human knowledge have been made since the college curriculum was established, and if the courses of study be not broadened to suit the changing times, if they be not hospitable to new truths, the colleges will cease to stand where they should stand, at the very van of the world's progress and in the center of its intensest intellectual life. When the course of

study which is still largely followed in our colleges was established, it was, too, in a great measure, an epitome of the world's knowledge, and as the zeal for learning which caused the founding of educational institutions was largely based on an awakened interest in the classical writers, study of the ancient languages seemed the great necessity to those who had not learned that the modern tongues were capable of meeting the requirements of scholars. As a legacy, perhaps from the schoolmen, the dry grammars and dictionaries of a language were studied rather than its literature. Now, the world's acquirements in the various fields of knowledge are far too great for a four years' course of study, and the problem should be to select a course which will the most generally meet the needs of an intelligent citizen of the great republic, and to make from time to time such modifications of the established training as will fit a student for the conditions under which he must live in the world. Upon completion of this course, the students in law, theology, philology, science or affairs, can thereafter add their special training.

What should be deemed for the young man of to-day a liberal education? The first answer to this question has long been "Language and Literature." And this answer as it seems to me is clearly right. Language is the instrument and measure of all culture, and literature is of language the garnered riches and the shining crown. But what language? Most emphatically, first, our own! President Elliot, of Harvard, says, "I may avow, as the result of my reading and observation in the matter of education, that I recognize but one mental acquisition as the essential part of the education of a lady or gentlemen, namely: the accurate and refined use of the mother tongue. Greek, Latin, French, German, mathe-

matics, natural and physical science, metaphysics, history and æsthetics are all profitable and delightful, both as training and acquisitions to him who studies them with intelligence and love; but not one of them has the least claim to be called an acquisition essential to a liberal education, or an essential part of sound training."

Professor Powell tells us that in some of our Indian languages, those of the utterly degraded diggers of Utah and Nevada, the whole vocabulary consists of scarcely more than a thousand words. As the digger progresses toward a higher plane, he experiences the higher thoughts and emotions; new words must be added to his list to symbolize this growth, and by this process a language is gradually evolved. The complexity of a language, its wealth of synonyms, its variety of words for expressing delicate shades of meaning, these are perhaps as accurate measures as we have of a nation's mental stature.

Our mother tongue is the language of our daily lives, and judged by the standards named, is an admirable language for careful study and training. It is as Lowell phrases it, the happiest result of the confusion of tongues. As the mixture of various bloods has made the English speaking nations the most vigorous of races, so has the mixture of diverse speeches given to them a language which is to-day by far the most perfect known vehicle of thought. It has absorbed into itself the riches of all the foregone tongues: the robust strength of the Latin, the adaptability of the Teutonic, the music of the Greek; and has so fused and blended all that they

> "Have suffered a sea change
> Into something rich and strange."

And as this is the language in which we must preach our

sermons or argue our causes, woo our sweethearts and transact all our affairs; and because too, it is such a miracle of strength and sweetness, its perfect mastery is the first object of a liberal education. An ability to read it with rapidity and real appreciation; to use it with elegance and accuracy; with nice distinction of meanings and refined use of synonyms, is the first and greatest of accomplishments. It is often argued that a knowledge of other languages is an aid in understanding our own, and this is true. No knowledge is amiss; but as life is too short to master more than one language, the research into other tongues should be merely incidental.

Before railroad transportation the Hudson River was the great highway by which all our products found their way to the metropolis. The commerce of the State was centered there and borne upon its swelling tides. How should the managers of this commerce be trained? They must know the river thoroughly and well; must be familiar with its whirlpools at high water, and its eddies at low; must know its shoals, its ever shifting and variant currents, and must have this knowledge at instantaneous command. What would we think of the navigator who fitted himself for his life work upon the river by a study of the Oriskany or Sauquoit, because they were the streams which helped make up the Hudson?

The training in our dear mother tongue, that most indispensable of trainings, should be by a study largely of its literature, the accumulated riches of the language as found in its most perfect masters and models. No person learns to speak a language with accuracy and elegance by the study of grammars and dictionaries. A child whose juvenile associations are with persons

using language correctly will acquire and use the tongue with precision and ease, and with added years, if his associations are with the great writers and sages whose brightest and wisest thoughts live forever in the printed page, framed in living words "like apples of gold in pictures of silver," he will have a training the best the world can offer for the refined and graceful use of language. There are no writers in any tongue more worthy of careful study than our own, and such study and practice in the language, with its rich and finely shaded meanings, would make men more appreciative readers and readier conversers and writers. How many of our young graduates know and have reason for the faith that is in them, that Shakspeare is the one supreme poet of humanity; that in his pages are set the gold and the gems of all the ages; that in our own dear mother tongue has been voiced the costliest wit, the wisest, the brightest, the most many-sided and marvelous intellect yet vouchsafed to the human race? A daily lesson in Shakspeare, a feast for the immortal Gods, for three or four years its study pursued under the loving guidance of a skillful teacher, where the student should analyze his literary methods, should study his rendering of every emotion, and his mastery of every passion; should see in the mirror which he holds up to nature every phase of our poor, dear, frail and noble humanity before him as an open book; should see language itself become plastic in the hands of the master, and at his bidding sing soft and sweet as the harp of Æolus, or be marshalled in periods resonant and majestic as the voice of the multitudinous sea: such a course of study would be in itself a liberal education.

Coupled with the study of our own literature, which has absorbed into itself the riches of most ancient and contemporary tongues and is thus freighted with the spoils of all the centuries, should be the study of other literatures: the Greek, the Latin, the French and German. While none of the students present know it, there are printed translations of most which is of value in all other languages, and these translations, too, made by men whose linguistic attainments will approximate closely to the grandeur of even a senior's knowledge. While we used to read our Greek and Latin with touching fidelity and ease, yet in translations one can go over vastly greater areas and receive wider impressions of these literatures.

What one of the old boys present to-day, whose knowledge of Greek and Latin or German has gathered about it the mistiness of twenty-five or thirty years, does not yet remember with delight the lectures of North and Upson and Dwight upon the literatures of these alien people? The digamma may be to us a tradition. How many can now tell if it were an agricultural implement or one of the attributes of the white armed Nausicaa? But the lectures on the women of Homer, on the Greek Drama, and the methods of Demosthenes, were living forces which will abide with us to the end. Had we spent in the study of the literatures of these nations in the academy and college one-tenth the time we spent upon their grammars, we might even now have known something about them.

I would not for a moment undervalue the priceless legacies of Greece and Rome to our modern civilization. Our indebtedness to these two nations is greater than we can measure or comprehend. In many fields their achievements yet mark the furthest limit of human en-

deavor. Never will the world outgrow the bard who sang,

> "Of Thebes' and Pelops' line,
> And the tale of Troy divine."

Never less than now can Athens be the world's one city which has secure foundations: the one city which can surely

> "Hold out
> Against the wreckful siege of battering days,
> When rocks impregnable are not so stout
> Nor gates of steel so strong but Time decays."

For she will be forever the sacred city of our souls, and

> "Shall live
> Where breath most breathes, even in the mouths of men."

But the question simply is, how best to know and inherit this great bequest. To appreciate and value the masterpieces of a Raphael, we do not spend our years in a study of the composition of his paints.

Modern science has been born since the college course of study was established. Of the vastness of its acquisitions I need scarcely speak. Outside the study of our language and literatures and next in importance to the student, should be a general survey of all scientific and philosophical knowledge, so that he can thereafter read intelligently concerning it, and keep apace with its progress. While there would not be time for a detailed knowledge of all scientific questions, a general view could be had.

Mathematics of course, the foundation of all scientific research: Chemistry, which is the key to all the secret processes of nature, and which has already brought forth into light many of her long hidden mys-

teries: Geology and Mineralogy, twin volumes wherein is written with much else the records of the chemical forces from the beginning of early time: Botany and Zoology, which starting from an almost common root bring forth the interminable splendors of organized life: Meteorology, the handmaid of the changing seasons in their stately march: Astronomy, teaching how from star dust to whirling nebulæ, from nebulæ to suns and suns to planets, is still repeated the story, old, yet ever new, how in the fullness of time and by methods yet before our eyes, the heavens and the earth were made.

"The harp at nature's advent strung
Has never ceased to play;
The song the stars of morning sung
Has never died away."

To a general survey of physical sciences, should be added a study of metaphysical and religious history, and in our higher institutions of learning, the training in these fields should be emphatically a liberal one. It should not aim to make young men disciples of any one school of philosophy, or of any religious sect or denomination, but to give them a general knowledge of the thoughts and studies of different generations and peoples in the science of mind and mental problems. And beyond this should come a history of the studies and strivings of the race in those fields which transcend positive human knowledge. Not merely the origins, the rise and growth of our own Christianity, but a general knowledge of the sacred ethical books of other races: the teachings of Confucius, Mohammed, Gautama. Such studies broaden and ennoble men. They illustrate the gradual growth of all systems of morals

by the addition and conservation through countless generations of new truths which the world will not suffer to perish. They illustrate that ever as now,

"Out from the heart of nature rolled
The burdens of the Bible old.
* * * * *
"The word by seers or Sybils told
In groves of oak or fanes of gold
Still floats upon the morning wind,
Still whispers to the willing mind.
* * * * *
"One accent of the Holy Ghost
The heedless world has never lost."

Such studies, illustrating how the same sentiments of justice, mercy and trust underlie all the great historic faiths, while making to us still dearer the gracious truths which came from Nazareth, yet inculcate as nothing else a wider and kinder charity for all, and bring home to our daily lives the truth that God made of one blood all the nations of men.

"In Vedic verse, in dull Koran,
Are messages of good to man.
* * * * *
"The prophets of the elder day
The slant-eyed sages of Cathay
Read not the riddle all amiss
Of higher life evolved from this.

"Wherever through the ages rise
The altars of self-sacrifice,
Where love its arms has opened wide,
Or man for man has calmly died,
I see the same white wings outspread
Which hovered o'er the Master's head."

The progress of knowledge has ever been from special to general. Certain seemingly isolated truths or laws are

discovered, and when thus through perhaps hundreds of years a sufficient number of data have been collected, come some great generalizing minds and group these seemingly diverse facts into a system, and show anew the relationships of all knowledge, the interdependence of all truths. We have lived in one of these epochs. We have for contemporaries, men who in a vaster sense than Bacon have taken all knowledge for their province; who in a single generation have well nigh seen the doctrine of evolution pass from a theory to a science. While the claims of its most sanguine advocates can not be accepted as proved, while the chain of evidence has yet many missing links, it would still seem as if enough had been positively demonstrated to show that this is the method of nature. At least this doctrine is the center around which revolves the thought and mental activity of to-day, and no young man should go forth from our higher institutions of learning without a thorough knowledge of its claims and possibilities. He should see how to the support of this doctrine the work of all specialists seems to contribute: how comparative philology and comparative theology alike illustrate the survival of the words and doctrines best adapted for the happiness of the race: how botany and zoology everywhere illustrate the effort of all forms of life to adapt themselves to their surroundings; and in the wider fields of biology and sociology to learn that in the organization of life, as in the growth of nations and societies, are seen everywhere the operation of the same laws; laws far reaching and infinitely beneficent and wise. Immeasurably does this study broaden our conception of the great first cause, who still, no less than in the Mosaic legend,

> "Bears in his hands the shears of destiny
> And has commandment on the pulse of life,"

but who yet in the gray dawn of time formulated and set in operation those laws which are for our study and delight; under which, through ages unnumbered, without break or jar, universes and worlds are made, suns and planets roll their appointed round:

> "Comets presaging change of times and states
> Brandish their crystal tresses in the air:"

life in endless form and variety is organized: nations and societies rise and flourish and decay; and which marshal before us in stately panorama, yet ever working toward the higher good, darkness and light, commerce and war, and art and love and song, and all the activities of life crowned at last by restful death, and then

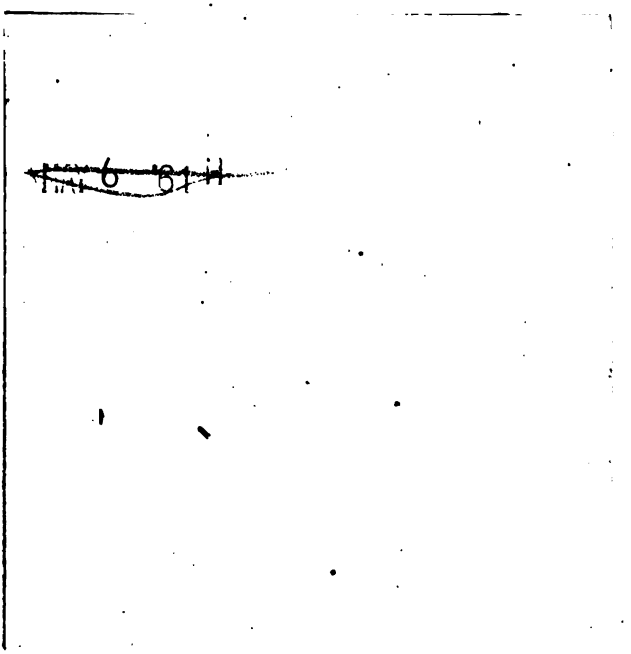
> "Other heights in other lives, God willing."

To recapitulate: the course of study which would seem to me to be demanded to-day of our colleges as a liberal education is the English language and general literature, science and philosophy. This should be the broad foundation adapted for every species of special subsequent training. It would not only be best for students contemplating a life of active business, but for the learned professions as well. The lawyer in the delicate and multifarious interests entrusted to his care, finds use for every form of knowledge and especially for all modern discoveries in science and mechanics which must be understood, that he may fitly apply to changed conditions of affairs the established rules of law. And especially for clergymen is needed a thorough knowledge of modern scientific thought to give them an often much needed boldness

in the utterance of their message. Many of us can remember how thirty years ago the presence in the Trenton limestone of a trilobite more than 6,000 years old, was expected to dethrone the Most High and overturn His kingdom; and even yet are found the successors of these timid souls, who see in the bathybius of Haeckel, or in protoplasm the rival of the King of Kings: who speak of the conflict of religion and science. With wider knowledge they would know that the designer and maker of all, in whom is no variableness or shadow of turning, who is the source and fountain of all truth, can utter but a single voice; that there is but one kind of truth, and whether it be revealed through prophets or rock strata, through Bibles or stars or suns, is still ever harmonious with itself, like the varied cords of some majestic anthem: that all things great and small alike are within the scope and purview of His wondrous laws—

> "Does any ocean roll so vast that he
> Forgets one wave of all that restless sea?"

And now my brethren of the alumni, pardon these sundry suggestions from one who is far more willing to admit than even you to assert, his superior fitness for the rôle of pupil rather than teacher, even for this brief half hour. But it is my consolation that dearer to us than all the speeches of our commencement week, are the cordial greetings with our old time comrades, the renewal of long sundered ties and friendships, and our new pledges of fealty to dear old Hamilton, the loving mother of us all. May her path be ever onward with a strength still equal to the time; ever wise to realize, and swift to solve the problems presented by the changing years.



Educ 3518.83
What is a liberal education :
Widener Library
005226904
3 2044 079 746 483